Heavy Expanded Mobility Tactical Truck
(HEMTT) System Plan

The HEMTT is a series of ten-ton, eight wheel drive vehicles designed to provide transport capabilities for re-supply of combat vehicles and weapons systems. Basic variants include cargo, tanker, wrecker, tractor, and load handling system. An initial multi-year contract was awarded in 1981 to Oshkosh Truck Corporation (OTC) of Oshkosh, Wisconsin. The system remains in production at OTC, under the Heavy Tactical Vehicle Family Contract, a five-year requirements effort awarded in March 2001. At the present time, almost 13,000 vehicles are fielded to United States forces.

Currently, the Army is improving the HEMTT through a Recapitalization Program, which consists of the Procurement of Ammunition, Army (PAA)-funded Extended Service Program (ESP), a process that seeks to leverage the Prime Contractor's vendor base to insert technology advancements and provide continuous component improvements to the vehicle baseline. The HEMTT is also a designated Section 912/816 Office of the Secretary of Defense (OSD) Life Cycle Pilot Program, initiated as one of ten pilot programs Army-wide and 30 across Department of Defense. Section I details the Recapitalization Program and Section II details the proposed performance measurement initiatives.

The overarching HEMTT Life Cycle Pilot Program is intended to reduce the operational and support (O&S) cost of the HEMTT fleet. The three initiatives comprising the Pilot Program are the core HEMTT Recapitalization Program, a continuous support improvements partnership with the Defense Logistics Agency (DLA), and a focus on soldier training and safety improvements highlighted by the introduction of Interactive Electronic Technical Manuals (IETMs).

Performance based measurements will be used to track program success and will form the basis for higher-level tracking. These measurements will allow the Army to gauge the benefits of both programs within a select portion of the fleet and to show how this would affect the entire fleet performance if enacted. All reports to Senior Army Leadership will come from Business Process Improvement Directorate (BPI) and will be available to participating organizations on the web.

The BPI, in coordination with the U.S. Army Tank-automotive and Armaments Command's (TACOM) Program Manager (PM), Heavy Tactical Vehicles (HTV), and Tactical Commodity Business Unit (CBU) will track the HEMTT System using a Sample Data Collection (SDC) Program currently

being tailored for recapitalization programs by the U.S. Army Materiel Systems Analysis Activity (AMSAA). For the HEMTT, this effort will build upon an extensive analysis of the system developed by AMSAA in Fiscal Year 1999 (FY99).

SECTION I.
HEMTT RECAPITALIZATION PLAN

The objectives of the HEMTT Recapitalization Plan are to:

a. Attain operational readiness for the HEMTT fleet at or above the Chief of Staff of the Army goal of 90 percent.

b. Reduce operating and support costs by 20 percent. The cost drivers being analyzed under these efforts result from earlier analysis by both TACOM and AMSAA.

The HEMTT Recapitalization Plan is fulfilled by the ESP initiative plus two others performed under the OSD 912-816 Pilot Program, a support improvement partnership and a focus on improving soldier safety and training. A fourth initiative, not a component of the OSD Pilot Program, was an Operations and Maintenance, Army rebuild program at Red River Army Depot and OTC which consisted of rebuilding vehicles to a zero miles/zero hours standard. It included the overhaul of all major assemblies (engine, transmission, transfer, axles, winches, cranes), the reconditioning/replacement of assembly components to Original Equipment Manufacturer (OEM) standards, the replacement of 100 percent of the brake components, hoses, tires, batteries, and electrical harnesses, as well as retrofit to bolt-together wheels. The benefits of the HEMTT overhaul/rebuild program are an extended useful life, reduced maintenance man-hours, increased system reliability, and improved operational readiness. This initiative ended in FY02 per direction received in the Vice Chief of Staff, Army approved Recapitalization Program.

HEMTT OSD 912-816 PILOT PROGRAM

The goals for the HEMTT pilot program are:

a. Improve fleet readiness through increased reliability and maintainability.

b. Reduce operational and support burden.

c. Modernize to meet current regulatory requirements.

d. Improve performance to meet changes to user's needs where economically feasible. These goals will be accomplished through three initiatives.

The first initiative improves the vehicle through an ESP, which will improve approximately 36 percent of the fleet with the current level of funding. The second initiative improves support, primarily through a partnership with DLA, which manages 95 percent of HEMTT parts. The third initiative focuses on soldiers, through improvements in safety and training.

INITIATIVE 1: HEMTT ESP

Initiative #1, the PAA-funded ESP is a process that seeks to leverage the Prime Contractor's vendor base to insert technology advancements and provide continuous component improvements to the vehicle baseline. Currently, ESP brings the oldest production vehicles to a zero miles/zero hours standard, integrates a Load Handling System (LHS) on select models, upgrades to an electronically controlled engine and transmission, and introduces selected enhancements from over 50 improvements previously installed on test bed vehicles. Among these are light-emitting diode lights and four-point seat belts with an improved safety seat.

Phase I of this program was initiated under OTC contract for 157 HEMTT LHS vehicles, which have been fielded to the first digitized division and the Interim Brigade Combat Team. These vehicles also carry a subset of the performance improvements incorporated in subsequent vehicles under the heavy tactical vehicle family contract awarded to OTC in March 2001.

Phase II, encompassing five models, focuses on the maximum integration of new production enhancements within allowable funding constraints, while allowing for backwards compatibility of component improvements into the legacy fleet. Phase II vehicles began fielding in FY02.

Method of Performance Measurement:

The AMSAA sample data collection will provide performance metrics on cost drivers and recapitalized components.

INITIATIVE 2: CONTINUOUS SUPPORT IMPROVEMENT PARTNERSHIP

The PM, HTV has reviewed the program structure and existing organizational relationships for HEMTT sustainment. The DLA controls approximately 95 percent of the HEMTT parts. In order to realize life cycle cost savings, active participation from DLA is essential. This participation is being realized through a partnership arrangement as opposed to a permanent organizational change. The PM, HTV, in coordination with TACOM's Tactical CBU and a formal partnership with the lead DLA activity for HEMTT (Defense Supply Center Columbus (DSCC)), ensures that active life cycle cost management is an ongoing activity for the program and that ongoing DLA initiatives (expansion of corporate/long term contracts, increased use of direct vendor delivery) are highlighted and maximized. This coordinated effort allows us to leverage our resources to the maximum extent, including use of contractor support under TACOM's Focused Sustainment contract.

Method of Performance Measurement:

The benefit of the HEMTT Continuous Support Improvements/ Partnerships program is cost recovery rate reduction on DLA-managed parts. The DSCC is providing quarterly status on savings accumulated for HEMTT common and unique parts.

INITIATIVE 3: TRAINING AND SAFETY IMPROVEMENTS

Reductions in O&S costs and O&S cost avoidance can be realized through improvements in training. These improvements include the use of IETMs, funded under BPI Program Budget Decision 721 in December 1999, the use of diagnostic and prognostic capabilities for engine and transmission troubleshooting and reduced cycle time for maintenance actions. In developing HEMTT IETMs, software written for the Palletized Load System IETMs is being reused to the maximum extent possible. This approach reduces development cost and schedule. Improvements in training also lead to an improved operational readiness rate. The final HEMTT IETM product was fielded in Fourth Quarter, FY02.

Method of Performance Measurement:

The benefit of the HEMTT Training and Safety Improvements program, focused on IETM development and fielding, is reduced "no evidence of failure" situations, representing a cost avoidance for the HEMTT Program.

SECTION II.
HEMTT PROGRAM PERFORMANCE MEASUREMENT

a. Cost Drivers

The following are the top 10 HEMTT cost drivers and their successors as contained in the HEMTT legacy and ESP vehicle(s). Baseline Mean Time Between Replacement (MTBR) was provided by AMSAA in July 2002 for the top 10 cost drivers listed in the OLD National Stock Number (NSN) column.

OLD NSN	MTBR	NEW NSN or *Mfr P/N	Nomenclature	Remarks
2815-01-257-3879	27690	2815-01-500-0668	Engine and Container	DDEC IV Module added to 8V engine
2500-01-257-3880	67246	2520-01-479-8832	Transmission & Container	New 4560 Allison world transmission
2610-01-126-1576	3069	2610-01-334-2694	Tire, Pneumatic, Vehicle	Newer XZL tire mounted with bolt together wheel
2610-01-165-0567	7793	None	Inner Tube, Pneumatic	Not needed with Bolt together Rim
2930-01-132-0978	112077	No Change	Radiator, Engine Coolant	No change
2520-01-348-1332	251512	No Change	Transfer Case w/Container	No change
4930-01-439-3045	717042	No Change	Tank, Truck Mounted	Improved Design
4330-01-152-2376	3111	2530-01-458-8017	Separator, Element	New design elements in Tanker fuel/water separatoe
		4330-01-458-9915	Element, Coalescer	
2530-01-287-2166	17180	Part # 974319	Brake Shoe	Extended Service Brake Shoe
2520-01-188-4129	77702	No Change	Receiver-Transmitter (Crane Remote Control)	No change

*Mfr P/N=Manufacturer Part Number

b. Recapitalized Components to be tracked by AMSAA

NSN or Mfr P/N	MTBR-Target	AIT to Aid SDC	Comments
2815-01-500-0668	33228	None	NSNs & P/N replace NSNs in legacy vehicles for which baseline MTBR appears above. Tanker fuel/water separator system (2376) replaced by system comprised of 8017+ 9915 NSNs; tracked as one system.
2520-01-479-8832	80695	None	
2610-01-334-2694	3683	None	
Part #974319	20616	None	
5830-01-458-8017 4330-01-458-9915	3733	None	

NSN or Mfr P/N	MTBR-Target	AIT to Aid SDC	Comments
2930-01-132-0978	134492	None	Replaced component
2520-01-348-1332	313814	None	Overhauled component
4930-01-439-3045	860450	None	Improved Component, same NSN
2520-01-188-5129	093242	None	Replaced component
4930-01-439-3045	860450	None	Improved Component, same NSN
2520-01-188-5129	093242	None	Replaced component

NSN	MTBR-TARGET
2610-01-165-0567	N/A-Component not needed in bolt-together wheel, will not be tracked

c. Components replaced by recapitalization to be tracked by AMSAA to maintain baseline.

NSN or Mfr P/N	MTBR-Target	AIT to Aid SDC	Comments
2815-01-257-3879	27690	None	AMSAA SDC tracks these NSNs to maintain baseline MTBR
2520-01-257-3880	67246	None	
2610-01-126-1576	3069	None	
2530-01-287-2166	17180	None	
4330-01-152-2376	3111	None	

Mean Time Between Failure or Mean Usage Between Failure would provide management data at the level of the HEMTT program's cost drivers. In July 2002, AMSAA collected and presented MTBR metrics on the original top 10 cost driver list contained in this document which provided an initial baseline for the continuation of data collection agreed to in this document. Follow on efforts, utilizing the updated cost driver list that contains successor NSNs/manufacturer part numbers, would allow distinction between legacy HEMTT vehicles and ESP vehicles.

d. Role of AMSAA in the HEMTT Recapitalization Program:

(1) Baselining–AMSAA is available to provide data and analytical support to those associated with HEMTT recap (PM HTV, BPI, Deputy Assistant Secretary of the Army (Cost and Economics) (DASA (CE)) etc.). This includes mainly baselining but also ad hoc analyses upon request.

(2) Data Collection–AMSAA will use the SDC to capture usage and sustainment data from recap and new production HEMTT assets. The AMSAA will provide this data to BPI for loading into the Army Recapitalization Tracking Information System database.

(3) Independent Assessments–AMSAA is available to perform independent assessments on the progress/performance of the HEMTT recap program.

e. Maintenance Standards for Recapitalized Components

The OTC in Oshkosh, WI performs the HEMTT recapitalization. The OTC builds vehicles to meet performance specifications. Those rebuilt HEMTT RECAP subcomponent parts are rebuilt to the OEM rebuild standards, vice National Maintenance Repair Standards. By rebuilding to the OEM standards we gain the benefit of the parts being covered by the OEM warranty.

All signatories agree to the following:

a. This is a living document and is current as of January 16, 2003.

b. The Methods of Performance Measurements outlined above.

c. The PM HTV and Headquarters, Department of the Army (HQDA) BPI in coordination with all parties will track results of HEMTT RECAP performance metrics established in this agreement.

d. The HQDA BPI will supply tracking results to participating orrganizations via the Acquisition Information Management (AIM) website and tailored reports.

e. The HQDA BPI will report tracking results to Army Senior Staff.

f. The PM HTV in coordination with all parties will assist with metric development to be used in tracking execution.

g. The AMSAA will supply SDC report data to PM HTV, the Army Recapitalization Tracking Information System and HQDA BPI.

h. The warfighters will ensure continued emphasis on accurate data reporting.

i. The warfighters will facilitate/authorize HQDA liaison visits when necessary.

j. End item and component serial numbers will be linked prior to fielding.

k. The PM HTV will provide updates to induction/distribution schedules, performance standards and baselines whenever necessary to HQDA BPI.

l. The HQDA will furnish funding details as requested, but at least monthly.

m. DASA (CE) will review cost and economic analysis efforts that have been validated and accepted by the MACOM and Major Subordinate Command cost analysis organizations and perform independent evaluations and analysis when applicable.

AGREEMENT DATE: January 16, 2003
APPROVED BY:

AMC	COL Moses Whitehurst Jr. /s-October 10, 2002
FORSCOM (Representing Warfighters)	Mr. David Skinner/s-August 5, 2002
PEO CS&CSS	BG Roger A. Nadeau/s-April 2, 2003
DASA (CE)	Mr. Robert Conley/s-August 15, 2002
TRADOC System Management	COL Thomas W. Feick, Jr./s-February 6, 2003
PM Heavy Tactical Vehicles	COL Robert L. Groller/s-June 3, 2002
SA(ALT)	June 4, 2003